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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,978	03/03/2004	Franck Thudor	PF030045	4862

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JOSEPH J. LAKS, VICE PRESIDENT
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PATENT OPERATIONS
PO BOX 5312
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EXAMINER

MANCUSO, HUEDUNG XUAN CAO

ART UNIT	PAPER NUMBER
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2821

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/791,978

Applicant(s)

THUDOR ET AL.

Examiner

Huedung Cao Mancuso

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/03/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election of invention Group I including claims 1-9 in the reply filed on 11/10/2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 11-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/10/2006.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-7, and 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Sievenpiper (US 6,864,848 B2).

Regarding claim 1, Sievenpiper (figures 10, 11a, 11b) teaches radiation diversity antenna comprising a radiating element of the slot-line type 20 coupled

Art Unit: 2821

electromagnetically to a feed line 34, wherein the radiating element consists of arms in a tree structure, the arm having a length equal to $k\lambda_{g}/2$ where k is an integer and λ_{g} is the guided wavelength in the slot-line constituting the arm, at least one of the arms comprising a switching means positioned in the slot-line constituting the said arm in such a way as to control the coupling between the arm and the feed line 34 as a function of a command see Sievenpiper (figs 10, 11a, 11b, and col. 12, lines 40-55).

Regarding claim 2, wherein each arm comprises a switching means see Sievenpiper (fig. 7, switches 18-1, 18-2, 18-3).

Regarding claim 3, wherein the switching means is positioned in an open-circuit zone of the slot see fig. 9.

Regarding claim 4, wherein the switching means is positioned in an open-circuit zone of the slot see fig. 9.

Regarding claim 5, wherein the switching means consists of a diode, a transistor arranged as a diode or an MEMS (Micro Electro Mechanical System) see Sievenpiper col. 12, lines 40-55).

Regarding claims 6, and 7, wherein each arm has a length which is delimited by an insert positioned in a short-circuit plane; and wherein the insert is placed at the

level of the junctions between arms see Sievenpiper (figures 10, 11a, 11b).

Regarding claim 9, wherein the antenna is produced by microstrip technology or by coplanar technology see Sievenpiper (col. 2, lines 20-26, and col. 7, lines 14-16).

Regarding claim 10, wherein the length of the slot-lines is chosen so as to produce frequency diversity see Sievenpiper (col. 12, lines 12-18).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sievenpiper (US 6,864,848 B2).

Regarding claim 8, wherein the tree structure has an H or Y or one which is associated with these shapes which Sievenpiper does not explicitly disclose. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use different shape of the radiating element, since it has been held to be within the general skill of a worker in the art to select a known shape on the basis of its suitability for the intended use as a matter of obvious design choice.

Art Unit: 2821

Inquiries

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huedung Mancuso whose telephone number is (571) 272-1939.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens, can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Huedung Mancuso
Patent Examiner

A handwritten signature in black ink, appearing to read "Huedung Mancuso", with a long horizontal line extending from the end of the signature.